0.00

Memo ·

QC

Quality Control

| | | | | | | | | | | | DQA: | Da | te: | |
|------------------|----------|-----------|----------|--------|------------------------------|-----|---------|-------------------------------|-------------------------------------|----|---------------|---|----------|---------------------------------|
| NCR: | Yes / No | | | | WORK ORDER NON-C | CON | NFORI | MANCE / UP | DATE | | QA Closed: | Da | ite: | |
| - : , | | | | | DISDOSITION | | | | ACAINST | | | | - | |
| Work Orde | er: | | | | DISPOSITION | | | | AGAINST | DE | PARTMENT, | PROCESS | | |
| Part N | No | | | | Rework Scrap Use-as-is | | | Skid-tube Machining noforming | Crosstube Small Fab Finishing | | 4 | Water Jet d. Eng. Coor. e/Packaging | | Engineering Quality Other |
| NCR I | No | | | | Work Order Update | | | Large Fab | Composite | L | | Supplier | | |
| Root | | | 1 | Descri | tion of work order update | | nitial | Ac | tion | - | Sign & | | | |
| Cause | Date | Step | Qty | 1 | or Non-conformance | 1 | ief Eng | l | ription | | Date | Verificatio | n | QC Inspector |
| Doc/Data | | | | | , | | | | | | | - | | |
| Equip/Tooling | | | | | | | | | | | | | | |
| Operator | | 1 | | | • | | | | | | | | | |
| Material | | | | | • | | | | | | | | | |
| Setup | | | | | | | | | | | | | | |
| Other | | | | | • | | | | | | | | | |
| Process | | | | | | | | | | | | | | |
| Supplier | | | | | | | | | | | | | | |
| Training | | | | | | | | | | | | | | |
| Unapproved | | | | | , | | | | | | | | | |
| | | | | | F | AUL | T CATE | GORY | | | | | | |
| Landi | ng Gear | | | | General | | - | | | _ | - | * | _ | , |
| | Bendin | g | | | Bend | | Grain | | | | Ovalized | | L | Pressure/Forced |
| | Centre | Not Conce | ntric to | o/s | BOM/Route | | Hardwa | are | | L | Over/Under | tolerance | \vdash | Temperature/Cure |
| | Cracks | | | | Broken/Damaged | " | Inspect | ion Incomplete | | | Part Incorred | ct | | Weld |

Instructions Incomplete/Unclear

Maintenance

Out of Calibration

Out of Sequence

Outside Dimensions

Mislabeled

Misread

Offset

Wrong Stock Pulled

Other

Part Lost/Missing

Positioned Wrong

Power Loss/Surge

Part Moved

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Crushed/Crimped

Inspection Strip in Tube

Torque Waves in Extrusion

Cuffs

Heat Treat

Burrs

Contamination

Countersink

Cut Too Short Drill Holes

Drawing Finish

Folio

| Work Ord <i>July-23-13 12:3</i> | | 4949 | | | *104 | 949* | | | | | | | Page 2 |
|--|-----------------------|--|-------------|--------------|--|---------------------|-------|--------------|---------------|--------------|---------------|------------------|----------------|
| Item ID: Revision ID: Item Name: | D4148-1 Crosstube Lug | g Plate, Fwd | | | Accept | *N900 |)040° | 100 | * | Setup | Start Stop | i di | S1* S2* |
| Start Date: Required Date: Reference: | 7/23/13 : 7/23/13 | Start Qty: 12.00 Req'd Qty: 12.00 | | *12* *12* | | Cust Item Customer: | | | | | | | |
| Approvals: | | in: | | 1 | Tooling: SPC (Y/N): | | oate: | | | Run | Start Stop | 1711 | R1* R2* |
| Sequence ID/ Work Center II 120 *120 *CQC Quality Control | D | Operation Description QC8- Inspect parts - secon | nd check | | Set Up/ Run Hours 0.00 PAS 0.00 27 0.00 3 9 89 | Tool ID | Tool# | Plan Code | Accept Qty | t Rej Qty | | Reject Number | Insp. Stamp |
| *150 *150* Packaging Packaging | | Identify as per dwg & Stor | ck Location | n8T/4 | 0.00 | | | | P | -X | | S | 13-9, |
| 160 *160* QC Quality Control | | QC21- Final Inspection - Memo | Work Order | r Release | 0.00 | | | | | | 19 | / /ka | J |

pl 13-09-13

| NCR: | ⁄es | / No | | | | WORK ORDER NON-O | CON | FORM | MANCE / UPDATE | | 0.01 | | |
|---------------|---------------|--------------------|-------------|----------|-------------------|--|----------|---------------------|---|----------|---------------|--|--------------------|
| | | | - | | | | | | | | QA Closed: | Da Da | te: |
| Work Orde | er: _ | | | | | DISPOSITION | _ | | | _ | PARTMENT | | |
| Part N | - | | | | | Rework Scrap Use-as-is Work Order Update | | r Therm | Skid-tube Crosstu Machining Small F noforming Finishi Large Fab Compos | ab ng | 4 | Water Jet d. Eng. Coor. re/Packaging Supplier | Quality Other |
| Root | | | | | Descri | ption of work order update | In | itial | Action | | Sign & | | |
| Cause | | Date | Step | Qty | C | or Non-conformance | Chie | ef Eng | Description | | Date | Verificatio | n QC Inspector |
| Doc/Data | | · | | | | | | | | | | | |
| Equip/Tooling | | - | | | | | | | | | | | |
| Operator | | | | | | | | | | | | | |
| Material | | | | | | | | | | | | | |
| Setup | | | | | | | | | | | | | |
| Other | | | | | • | | | | | | | | |
| Process | | | | | | | | | | | | | |
| Supplier | | | | | | | 1 | | | | | | |
| Training | Щ | | | | | | ļ | | | | | | |
| Unapproved | | | | <u> </u> | | | <u> </u> | | | | | | |
| | | | | | | | AULT | CATE | GORY | | | | |
| Landi | $\overline{}$ | | | | | General | | | | Γ | Ovalized | | Pressure/Forced |
| | | Bending | | | | Bend BONA/Bounts | \vdash | Grain | | \vdash | Over/Under | toloronco | Temperature/Cure |
| | ${f -}$ | Centre No | t Concer | itric to | ^{0/8} - | BOM/Route | | Hardwa | | - | Part Incorred | | Weld |
| | - | Cracks | | | - | Broken/Damaged | - | • | on Incomplete ions Incomplete/Unclear | - | Part Lost/Mi | | Wrong Stock Pulled |
| | - | Crushed/0 Cuffs | rimpea | | - | Burrs Contamination | | | nance | | Part Moved | issii ig | |
| | Н | Heat Trea | | | | Countersink | - | viaiiite Vislabe | | - | Positioned V | Vrong | |
| | | Inspection | | Tubo | - | Cut Too Short | | viisiabe Misread | | - - | Power Loss/ | - | Other |
| | - | Ripples in | - | iube | - | Drill Holes | | viisi ead Offset | , | | J. 0WC. 1033/ | Ju. 8c | |
| | ш | | | | ⊢ | | \vdash | | | | | | |
| | | Torque W | aves in F | etrusio | n I | Drawing | 1 10 | Out of (| Calibration | | | | |

Outside Dimensions

DQA:

Date:

Wave/Twist in Tube

Folio

Picklist Print

July-23-13 12:57:27 PM

Work Order ID:

104949

Parent Item:

D4148-1

Parent Item Name:

Crosstube Lug Plate, Fwd

Start Date: 7/23/13

Required Date: 7/23/13

Page 1

Start Qty: 12.00

Required Qty: 12.00

Comments:

IPP Rev:A 10.06.24 new issue DD verf:EC

IPP Rev:B 10.10.29 as per revC DD verf:EC

DWG REV.D DD VERF:EC

IPP REV:C 11.03.02 AS PER

| Component Item ID/ Item Name | Replacement Item ID | Mfg/ Purch | Bin Item | Primary Location | Last Location | Route Seq ID | Unit of Measure | Qty on Hand | Qty per Kit | Total Qty | Qty Issued | Date Issued | Status |
|---|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|
| M304S11GA 304/316 0.125 Sheet | | Purchased | No | | | 100 | sf | 288.3533 | 0.3607 | 4.5562104 | | Ac_ | 13.09. |
| | | | | Location | | Loc Qty | <u>Lo</u> | c Code | | | | | |
| | | | | MAT020 | | 288.3532632 | | | | | | | |
| | | | | 122 | 521 | 19.1432632 | | | | | | 11-1 | |
| | | | | 124 | 445 | 95.2 | | | 124 | 443 | | 4.56 | |
| | | | | M1 | 26075 | 174.01 | | • | | | | | |

| | | | | | | | | | DQA; | Date: | |
|---------------|------|------|-----|-------------------|-------------------------------------|-----------|--|---|------------|---|---------------------------|
| NCR: Yes | / No | | | WORK | ORDER NON-C | ONFORM | AANCE / UPI | | QA Closed: | Date: | |
| Work Order: | | | | D | ISPOSITION | | | AGAINST DE | PARTMENT | /PROCESS | |
| Part No. | | | | Work | Rework Scrap Use-as-is Order Update | Therm | Skid-tube Machining noforming Large Fab | Crosstube Small Fab Finishing Composite | | Water Jet d. Eng. Coor. re/Packaging Supplier | Engineering Quality Other |
| Root | | | | Description of wo | rk order update | Initial | Act | ion | Sign & | | |
| Cause | Date | Step | Qty | or Non-conf | ormance | Chief Eng | Descr | ription | Date | Verification | QC Inspector |
| Doc/Data | | | | | | | | | | | |
| Equip/Tooling | | | | | | | | | | | |
| Operator | | | | | | | | | | | |
| Material | | | | | | | | | | | |
| Setup | | | | , | | | ~ | | | 1 | |
| Other |] | | | | | | | | ** | | |
| Process | 1 | | | | | | | | , | | |
| Supplier | 1 | | | | | | | | | | |
| Training | 1 | | | | · | | • | | | | |
| Unapproved | | | | | <i>y</i> | | | | | | |
| | | | | | FA | ULT CATE | GORY | | | | |

General

Ovalized Pressure/Forced Bend Grain Bending BOM/Route Over/Under tolerance Temperature/Cure Centre Not Concentric to O/S Hardware Broken/Damaged Inspection Incomplete Part Incorrect Weld Cracks Burrs Wrong Stock Pulled Crushed/Crimped Instructions Incomplete/Unclear Part Lost/Missing Cuffs Part Moved Contamination Maintenance Mislabeled Positioned Wrong Heat Treat Countersink Other Inspection Strip in Tube Cut Too Short Misread Power Loss/Surge Drill Holes Ripples in Bend Offset Torque Waves in Extrusion Drawing Out of Calibration Finish Out of Sequence Turning Sequence Wave/Twist in Tube Folio Outside Dimensions

Landing Gear

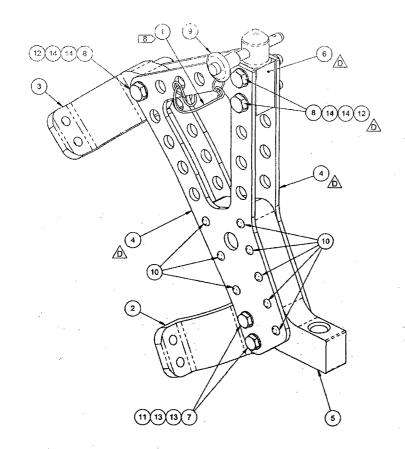
| DART AEROSPACE LTD | Work Order: | 104949 |
|--------------------------------------|--------------|-------------|
| Description: Fwd Crosstube Lug Plate | Part Number: | D4148-1 |
| Inspection Dwg: D4148 Rev: D | | Page 1 of 1 |

FIRST ARTICLE INSPECTION CHECKLIST

| Drawing | | Actual | | | Method of | |
|-----------|---------------|---------------|----------|---------------------------------------|------------|----------|
| Dimension | Tolerance | Dimension | Accept | Reject | Inspection | Comments |
| Ø0.129 | +0.005/-0.001 | 129 | 6 | | V | Ukm-01 |
| Ø0.191 | +0.005/-0.001 | 191 | _ | | V | VEIX -D(|
| Ø0.38 | +0.006/-0.001 | .38 | _ | | V | |
| Ø0.257 | +0.006/-0.001 | , <u>a</u> 57 | _ | | V | |
| Ø0.50 | +0.008/-0.001 | ,50 | _ | | V | |
| 0.94 | +/-0.030 | .94 | - | | V | |
| 4.47 | +/-0.030 | 4,47 | _ | | V | |
| 0.750 | +/-0.010 | ,750 | ~ | | V | |
| 8.47 | +/-0.030 | 8.47 | - | | V | |
| 8.096 | +/-0.010 | 8.096 | _ | | V | |
| 5.43 | +/-0.030 | 5,43 | 7 | | V | |
| 5.197 | +/-0.010 | 5.197 | <u> </u> | | V | |
| 4.733 | +/-0.010 | 4.733 | - | | V | |
| 0.310 | +/-0.010 | 1310 | - | | V | |
| 0.750 | +/-0.010 | ,750 | • | | V | |
| 0.375 | +/-0.010 | ,375 | | · · · · · · · · · · · · · · · · · · · | V | |
| 1.84 | +/-0.030 | 1.84 | _ | | V | |
| 0.92 | +/-0.030 | .92 | | | V | |
| 3.000 | +/-0.010 | 3,000 | - | | j j | |
| 0.750 | +/-0.010 | 1750 | - | | V | |
| 0.625 | +/-0.010 | .625 | _ | | V | |
| 1.982 | +/-0.010 | 1.981 | • | | J | |
| 0.991 | +/-0.010 | 991 | ~ | | V | |
| 0.77 | +/-0.030 | 177 | _ | | Ĭ | |
| 1.54 | +/-0.030 | 1,54 | - | | V | |
| 2.47 | +/-0.030 | 247 | - | | V | |
| 0.82 | +/-0.030 | , 82 | _ | | V | |
| 3.57 | +/-0.030 | 3,57 | - | | V | |
| 1.23 | +/-0.030 | 1.23 | - | | V | |
| 0.73 | +/-0.030 | ,73 | - | | V | |
| 0.125 | +/-0.010 | .117 | | | V | |
| Ø0.252 | +0.003/-0.000 | ,252 | - DAS | | V | |

| , , , , , , , , , , , , , , , , , , , | | 21 | | |
|---------------------------------------|-------------|---------|-----------------------|--|
| Measured by: Ae | Audited by: | 9-89 | Preliminary Approval: | |
| Date: 13.09.12 | Date: | 13 9 12 | Date: | |

| Date | Change | Revised by | Approved |
|----------|--|--|--|
| 10.08.04 | New Issue | | 1.0000 |
| 10.10.08 | Dwg Rev updated | | |
| 10.11.05 | Dimensions updated per Dwg Rev C | | |
| 11.03.08 | | | |
| 12.02.01 | Dimensions updated per Dwg Rev D | | 丛 |
| | 10.08.04 10.10.08 10.11.05 11.03.08 | 10.08.04 New Issue 10.10.08 Dwg Rev updated 10.11.05 Dimensions updated per Dwg Rev C 11.03.08 Dwg Rev updated | 10.08.04 New Issue KJ 10.10.08 Dwg Rev updated KJ 10.11.05 Dimensions updated per Dwg Rev C KJ 11.03.08 Dwg Rev updated KJ |



D4148-041 FWD X-TUBE LUG ASSY

8

NOTES:
1) MATÉRIAL: N/A
2) FINISH: NONE
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: N/A
6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4148-041" PER DART QSI 044 6.1
7) WEIGHT: 3.67 lbs
8) ATTACH D2690-6 TO D4148-1 BY LOOPING AROUND A LIGHTENING HOLE FIRST AND THEN SECURE TO MS17984-C413

DESCRIPTION D4143-01* FWD X-TUBE LUG ASSY D2590-6 LANYARD D3910-1 X-TUBE LUG D4091-1 MOUNTING LUG D4148-1 FWD X-TUBE LUG PLATE STUD RECEIVER LOWER D4148-3 D4148-5 EYEBOLT STUD AN3C12A BOLT BOLT AN4C13A PIP PIN RIVET MS17984-C413 MS20615-4M18 MS21043C3 11 NUT MS21043C4 NUT 13 NAS1149C0332R WASHER NAS1149C0432R WASHER

LOMOLONO 13-07-25

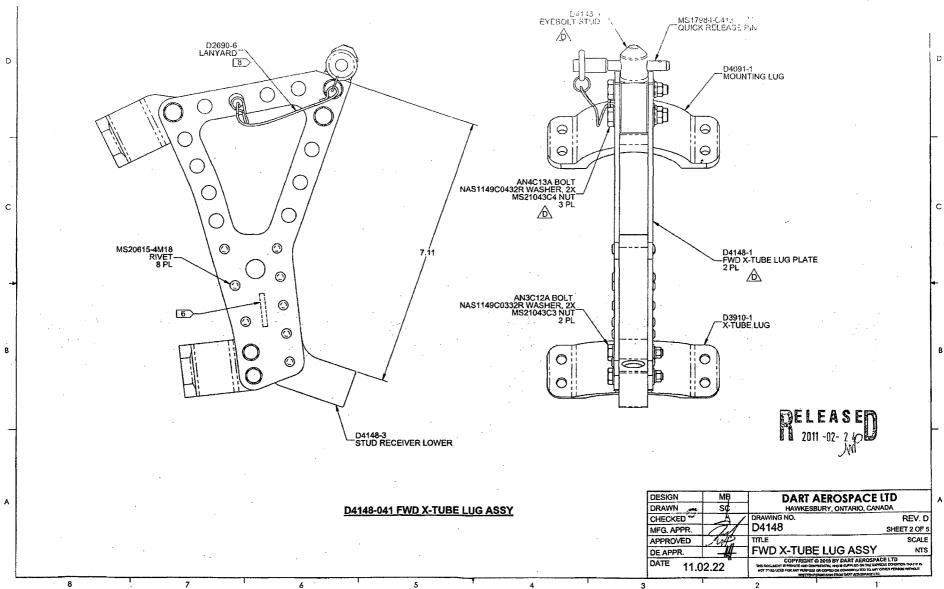
| а | MS2104 | I3C3 AN | D QTY(| I) NAS1149 | 6-3); HOLE DIA ACED OTY(2) AN3C12A, C0332R WITH OTY(2) I) NAS1149C0432R (D3- | sc | 11.02.22 |
|--------|-------------------------------------|---|--|--|--|-------|--------------|
| С | REDESI ISSUES | GNED C | 4148-1 350-59 | -3 TO ADD I SHORT S | RESS COMPATIBILITY TEPS | мв | 10.10.12 |
| В | WASHE MS2051 Ø0.129 Ø0.191 | R (ZN D: 5-4M20 3 Pl. (ZI WAS 0. | 3-1, B7- (ZN D3- N D6-3); 129 (ZN | 2 & B4-2); N 1 & B7-2); Q Ø0.129 7 F | 8 WITH QTY(2) EACH NAS1149C0332R IS20815-4M18 WAS 00.1912 PL REPLACES PL WAS 10 PL (ZN A7-3); /. B. | мв | 10.07.05 |
| A | NEW IS | SUE | | | | MB | 10.06.18 |
| REV. | | | | DESCRIPTI | ON | BY | DATE |
| DESIGN | 1 | M | В | | DART AEROSP | ACE L | fD i |
| DRAW | 1 | S | ¢ | 1 | HAWKESBURY, ONTAR | - | |
| CHECK | ED | | 1 | DRAWING | | | REV. D |
| MFG. A | PPR. | 1 | 7 | D4148 | 8 | | SHEET 1 OF 5 |
| APPRO | VEO | 111 | W. | TITLE | | | SCALE |

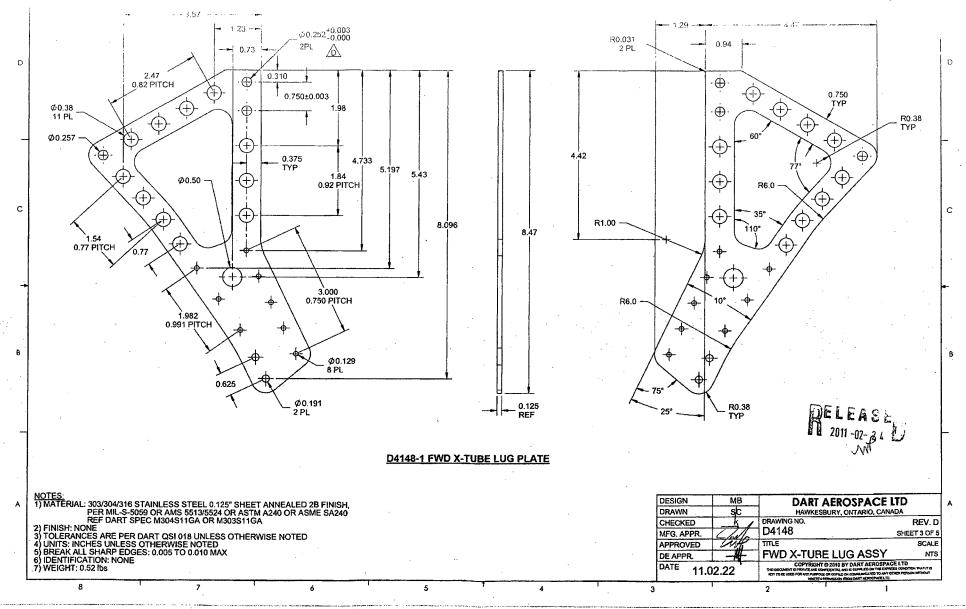
DATE 11.02.22

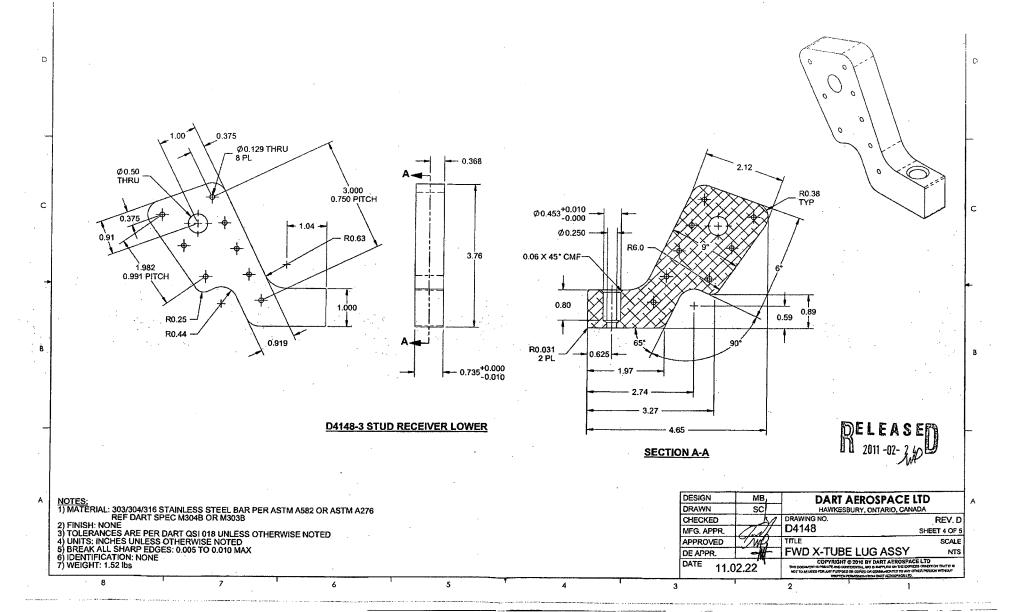
DE APPR.

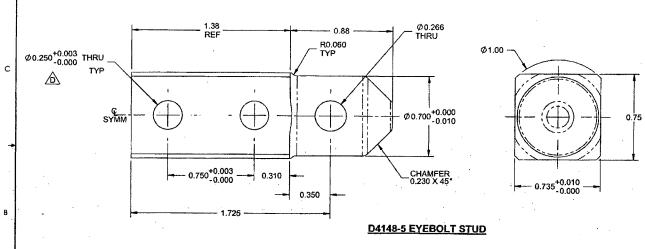
FWD X-TUBE LUG ASSY COPYRIGHT @ 2010 BY DART AEROSPACE LTD

NTS









| NOTES: |
|---|
| 1) MATERIAL: 303/304/316 STAINLESS STEEL BAR PER ASTM A582 OR ASTM A276 |
| REF DART SPEC M304B OR M303B |
| OVER HOLL MOVIE |

2) FINISH: NONE
3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK ALL SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: NONE
7) WEIGHT: 0.27 lbs

| DESIGN | MB | DART AEROSPACE | LTD |
|------------|------|--|--|
| DRAWN | s¢ | HAWKESBURY, ONTARIO, CAN | ADA |
| CHECKED | _A_ | DRAWING NO. | REV. D |
| MFG. APPR. | Tool | D4148 | SHEET 5 OF |
| APPROVED | Diff | TITLE | SCALE |
| DE APPR. | | FWD X-TUBE LUG ASSY | NTS |
| DATE 11.0 | 2.22 | COPYRIGHT © 2010 BY DART AEROSPA THE DODASH A PRIVATE HIS CONFEDERAL AND C SUPLED OF THE EPP- HOT TO BE USED FOR ANY PAPOSES, OR COPING DAY ARROWS TO ME. *********************************** | ISSE COMENTION THAT IT G DENGR PERSON WITHOUT |

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